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Re-discovery of Tempel's Comet of Short Period. Letter from M. Stephan, Director of the Observatory at Marseilles, to Mr. Hind, dated Marseilles, April 5.

"I am very much obliged by your having sent me the ephemeris of the comet of Tempel (1867 II). The state of the sky has not allowed of my utilising it, until the night before last, when I immediately found the comet, not far from the place assigned by Dr. Seeliger. My observation is as follows:—

At $15^{h}\,26^{m}\,24^{s}$ M.T. at the New Observatory.
App. R.A. $16^{h}\,26^{m}\,21^{s}{\cdot}57$; App. N.P.D. $100^{\circ}\,39'\,12''{\cdot}5$.

Mean Position of the Comparison Star for 1873·0.
W. H. XVI. 579 $16^{h}\,31^{m}\,37^{s}{\cdot}20$ $100^{\circ}\,35'\,24''{\cdot}8$ Weisse's Cat.

The comet is excessively faint. I saw it again for an instant last night, but the sky was very vaporous, and it was not possible to obtain another exact position."

The corrections to Dr. Seeliger's ephemeris indicated by the Marseilles observation are—

In R.A.	$-3^{m}\,28^{s}$
In N.P.D.	$+\,5'{\cdot}3$

On a large Automatic Spectroscope. By John Browning, Esq.

I have just completed for Mr. Gassiot a large spectroscope for presentation to the Oxford University; and the instrument having been pronounced by the highest authority we have in England the most perfect and most powerful instrument of the kind yet made, I have thought a very brief description of it might not be without interest to many Fellows of the Society.

The great dispersive power of the instrument—which I have now the honour of exhibiting before you—is obtained by a battery of six compound prisms, 3 inch high, and 2 inch wide, the light, after passing through the upper half of these prisms, is reflected back through the lower half; and the size of the instrument will be best imagined when the fact is stated that the light, in its passage through these prisms, has to pass through more than 4 feet of glass before it reaches the eye of the observer. The telescopes are of 18-inch focal length, and the object-glasses 1¼-inch in diameter. The prisms are provided with the automatic arrangement for keeping them at the minimum angle of deviation for any ray under examination, which I have already had the honour of describing in the Proceedings of the Society. It is intended that all the measuring of the spectra should be done by means of a micrometer eye-piece placed in the telescope; but for the purpose of readily finding any line in the spectrum, the prisms are provided with a vernier, which moves round the circular arc. The divisions

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are on an alloy of palladium with silver. There is a contrivance for setting the train of prisms in motion, the milled head which moves the prisms being close to the eye-piece of the telescope, and thus completely under the command of the observer. Though every part of the instrument has been made as light as it well could be consistently with strength, the instrument weighs rather more than 140 pounds.

On a Spectrometer. By John Browning, Esq.

Several months since Colonel Campbell suggested to me a simple method of mapping out the spectrum by attaching a quick-threaded screw to the slow-motion screw of a fine micrometer. I regret that so long a time should have elapsed before I saw the full value of this ingenious plan. I have now the pleasure of exhibiting a contrivance made on this plan; it will be seen that the contrivance can be attached to an ordinary micrometer; a quick thread carries a small frame between brackets, similar to the carrier of the dividing point of an ordinary dividing-engine. The method of using this contrivance is as follows: A piece of smoked glass is inserted in a metal frame under the pointer; on bringing the micrometer-wires to coincide with any line, a corresponding line can be made by a stroke of the pointer on the smoked glass, and this proceeding can be carried on with as many lines as may be in the field of view. When used on an automatic spectroscope, the prisms should be moved, and the mapping continued until as many lines are registered as the glass will contain. To avoid loss of time in the quick-threaded screen, the carriage is kept to one bearing by the pressure of a spring. After taking the glass out of the frame, it may be varnished in a manner similar to that employed for varnishing photographic negatives.

Phenomenon observed at Sea. By Commander H. P. Knevitt.

(*Communicated by Rear-Admiral Richards, Hydrographer.*)

A phenomenon having been seen from this ship when on the passage from Manzanilla to this place, I think it advisable to make it known at once, instead of waiting the transmission of my remark-book at the end of the year.

On the 16th May, 1872, at $2^h\ 45^m$ A.M. (the weather having been squally since midnight) a phenomenon was seen in the heavens at an altitude of about 50° and bearing east of compass; the ship at the time being in lat. 14° 55′ N. and Long. 99° 58′ W.

I did not see it myself, but the following is a description given of it by Lieutenant Cecil G. Horne, who was officer of the watch:—

"Attention was first drawn by a very bright flash, resembling a small flash of vivid lightning, but being much more solid, and

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